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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/816,877

04/05/2004

Steven E. Strauss

Strauss 13

2669

46900

7590

02/26/2009

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EXAMINER

PARRIES, DRUM

ART UNIT

PAPER NUMBER

2836

MAIL DATE

DELIVERY MODE

02/26/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/816,877

Applicant(s)

STRAUSS, STEVEN E.

Examiner

DRU M. PARRIES

Art Unit

2836

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2008.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-15, 17, 18, 22-25, 27, 28 and 32 is/are rejected.
- 7) ☒ Claim(s) 16, 19-21, 26 and 29-31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed December 22, 2008 have been fully considered but they are not persuasive. Regarding the Applicant's assessment of the combination of the Admitted Prior Art (APA) and Brodeur, the Examiner believes there may be some confusion. To explain, the analogous "first power rail" in Brodeur, compared to (400) of APA, is reference number 31. Therefore, the voltage meters (38a&b) of the Brodeur reference are measuring the voltages (Vout1, Vout2) that are being received by the respective circuit modules (i.e. the vertical lines leading to circuit modules 402-405 of APA, Fig. 5). Brodeur teaches a regulator (32, 34, 42) that outputs power onto a power rail (31), and provides a plurality of outputs (Vout1, Vout2) to various circuit modules, and measures the output voltage to each circuit module (via 38) and based on the measured voltages, controls the regulator (via 42).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 13-15, 17, 18, 23-25, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (APA) and Brodeur (6,525,434). Regarding independent claims 13 and 23, APA teaches an integrated circuit comprising first and second power rails (400, 401); a first voltage regulator (500) coupled to electrically bias the first power rail with respect to the second power rail; and a plurality of circuit modules (402-404), each coupled

between the first and second power rails to draw power therefrom. APA fails to explicitly teach a plurality of voltage meters. Brodeur teaches a circuit similar to that of APA comprising a first voltage regulator (32, 34, 42) that supplies power on a power rail (31) to a plurality of circuit modules (connected to Vout1 and Vout2). Brodeur teaches a plurality of voltage meters (input to negative terminal of 38a&b), each coupled to measure a voltage level received from the power rail by a respective one of the circuit modules, wherein a voltage output of the voltage regulator applied to the first power rail is controlled based on the voltage levels measured by the voltage meters so that each of the circuit modules receives a respective desired voltage level from the first power rail (Col. 5). It would have been obvious to one of ordinary skill in the art at the time of the invention to implement voltage meters throughout the circuit so that the circuit modules can receive their necessary power to function properly at all times.

Regarding claims 14 and 24, APA teaches the idea of the voltage levels received from the first power rail by at least two of the circuit modules differ due to a voltage drop along the first power rail.

Regarding claims 15, 17, 18, 25 and 27-28, APA fails to explicitly teach a power manager. Brodeur teaches a power manager (38, 41) operatively coupled to the first voltage regulator and to the plurality of voltage meters, wherein the power manager is adapted to receive voltage-level measurements from the plurality of voltage meters; and control the voltage output of the first voltage regulator based on the voltage-level measurements, so that the voltage level received from the first power rail exceeds a design-voltage threshold. The power manager also controls the first voltage regulator to minimize the difference between the voltage level received from the first power rail and a desired voltage level. It would have been obvious to one of

ordinary skill in the art at the time of the invention to implement a power manager into APA's invention to control the power being provided to the circuit modules so that they can receive the correct amount of power to function properly.

4. Claims 22 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (APA) and Brodeur (6,525,434) as applied to claims 13 and 23 above, and further in view of Tobin et al. (5,771,240). APA and Brodeur teach an integrated circuit as described above. They fail to explicitly teach a pin to which the voltage meter readings are routed to enable external sampling. Tobin teaches the idea of having an integrated circuit comprising a pin to which various monitoring signals are routed to enable external sampling (Col. 1, lines 30-36). It would have been obvious to one of ordinary skill in the art at the time of the invention to have a pin in APA's invention to which voltage levels measured by the voltage meters are routed to enable external sampling of the voltage levels so a manufacturer can determine if the IC is working correctly.

Allowable Subject Matter

5. Claims 16, 19-21, 26, and 29-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: the references of record, either alone, or in combination, do not teach or suggest at least the limitations of: Regarding claims 16 and 26, the voltage-level measurements being received in digital form over a digital bus; Regarding claims 19 and 29, having a second voltage regulator in parallel with the

first voltage regulator to also provide power to the first power rail and controlled in the same way as the first. Claims 20, 21, 30, and 31 are dependent upon claims 19 and 29.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dru M. Parries whose telephone number is (571) 272-8542. The examiner can normally be reached on Monday -Thursday from 9:00am to 6:00pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Elms, can be reached on 571-272-1869. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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2-18-2009

/Albert W Paladini/

Primary Examiner, Art Unit 2836

2/19/09